

File 997234

AL-16-800304- /

21 January 1966

Dear Boyd:

Subject: Contract - Process Specifications and Curves for
RT-12R and RT-24 Processors

We are forwarding herewith thirteen (13) copies of the
following Process Specifications and Curves for the subject Processors:

a. RT-12-R Process:

Regular Process

3400
3401
3404
8430

Reversal Process

3400
3401
3404
8430

b. RT-24 Process:

Kodabromide F-2

Resisto Rapid N-2

RRW:eb


Dick

Copy #1: BN w/13 encls. (unclassified)
#2: JP w/1 enc. (unclassified)

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Approved For Release 2005/02/17 : CIA-RDP78B04770A001100050004-2

DATE 11-12-65

PROCESSING SPECIFICATION NO.

Reversal Process

MACHINE RT-12R

PRODUCT Original Negative

EMULSION TYPE 3400

SIZE Up to 9.5 inches

PROCESS EMULSION UP ☒ DOWN ☐

MACHINE SPEED DIAL SETTING 5.5

FILM STRIP SPEED 5.5"/m

SECONDS PER RACK 52

THREAD-UP Full

PROCESSING STAGE	CHEMICAL TANK	RPL.	(mls/min) RPL. RATE	(°F) TEMP.	TIME	NO. R.	PUMP PRESSURE	NOZZLE TYPE	TYPE	AGITATION GAS	PRES.
1st Developer	14DN20G*	14DN20G	150 (70mm) 300 (9 $\frac{1}{2}$ ")	80±.5	3'20"	4		Roller Action			
Rinse	H ₂ O	H ₂ O	100%	80±2	50"	1		Roller Action			
Bleach	R-9S	R-9-RS	300 (70mm) 800 (9 $\frac{1}{2}$ ")	80±2	50"	1		Roller Action			
Clearing Bath	CB-2	CB-2	300	80±2	50"	1		Roller Action			
Rinse	H ₂ O	H ₂ O	2 gal.	80±2	50"	1		Cascading			
2nd Developer	D-95	D-95R	300	80±1	1'40"	2		Roller Action			
Rinse	H ₂ O	H ₂ O	2 gal.	80±2	50"	1		Cascading			
Fix	Type A	Type A	300	80±2	50"	1		Roller Action			
Wash	H ₂ O	H ₂ O	2 gal.	80±2	2'30"	3		Cascading			
Dry				130±5							

DAMPER SETTINGS:

INTAKE

EXHAUST

VARIAC SETTINGS
LOCATION OR NO. OF WGTs.

COMMENTS:

1. Re-exposure amperage set at 5.25.
2. Power stat set at 70.
3. Heater selector set at 5.
4. Blower selector set at 3.

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* To a fresh tank, add 1 bottle of Type A starter per rack of developer.

Date 17 Dec. 1965

EXPOSURE		Experimenter	Date	Witness	Date
Sensitometer	1B				
Filter	Daylight				
Exposure Time	1/100 second				

Log E₁₁ = 2.70

PROCESSING

Gamma	Fog
2.20	.12

DENSITY

3.8

3.6

3.4

3.2

3.0

2.8

2.6

2.4

2.2

2.0

1.8

1.6

1.4

1.2

1.0

.8

.6

.4

.2

0

Standard process control curve
for use with RT-12R processor,
Specification for 3400 Reversal

LOG EXPOSURE

DATE 11-12-65

Negative Process
MACHINE RT-12R
PRODUCT Original Negative
EMULSION TYPE 3400
SIZE Up to 9.5 inches
PROCESS EMULSION UP ☒

MACHINE SPEED DIAL SETTING	18
FILM STRIP SPEED	18' / m
SECONDS PER RACK	14"
THREAD-UP	Full

Intermediate Process: Level

[illegible]

CONTENTS:

CHAPTER 10

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To a fresh tank of developer, add 1 bottle of Type A starter solution per rack.

1. Adjust speed dial to zero ft/min before shutting off machine.
2. Heater selector set at 5. Blower selector set at 3.

Emulsion 3400

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Date 17 Dec. 1965

EXPOSURE		Experimenter	Date	Witness	Date
Sensitometer	1B				
Filter	Daylight				
Exposure Time	1/100 second				
		Log E 11 = 2.70			

PROCESSING

Gamma	.6 G/Speed	Fog
2.60	2.60	.10

Standard process control curve
for use with RT-12H processor.
Specification for 3400 Negative

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V

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LOG EXPOSURE

DENSITY

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PROCESSING SPECIFICATION NO. _____

DATE 11-12-65

Reversal Process

MACHINE RT-12R
PRODUCT Original Negative
EMULSION TYPE 3404
SIZE Up to 9.5 inches
PROCESS EMULSION UP ☒ DOWN ☐

MACHINE SPEED DIAL SETTING 9
FILM STRIP SPEED 91/m
SECONDS PER RACK 28
THREAD-UP Full

PROCESSING STAGE	CHEMICAL		(mls/min)	(°F)	TIME	NO. R.	PUMP PRESSURE	NOZZLE TYPE	TYPE	AGITATION	
	TANK	RPL.	RPL. RATE	TEMP.						GAS	PRES.
1st Developer	14DN20G*	14DN20G	250 (70mm) 500 (9 1/8")	72±.5	1'51"	4			Roller Action		
Rinse	H ₂ O	H ₂ O	100%	72±2	28"	1			Roller Action		
Bleach	R-9S	R-9-RS	400 (70mm) 1000 (9 1/8")	72±2	28"	1			Roller Action		
Clearing Bath	CB-2	CB-2	500	72±2	28"	1			Roller Action		
Rinse	H ₂ O	H ₂ O	2 gal.	72±2	28"	1			Cascading		
2nd Developer	D-95	D-95R	500	72±1	56"	2			Roller Action		
Rinse	H ₂ O	H ₂ O	2 gal.	72±2	28"	1			Cascading		
Fix	Type A	Type A	500	72±2	28"	1			Roller Cascading		
Wash	H ₂ O	H ₂ O	2 gal.	72±2	1'24"	3			Cascading		
Dry				125±5							

DAMPER SETTINGS:
INTAKE _____

EXHAUST _____

VARIAC SETTINGS
LOCATION OR NO. OF WGTs. _____

COMMENTS:

1. Re-exposure amperage set at 5.25.
2. Powerstat set at 70.
3. Hester selector set at 5.
4. Blower selector set at 3.

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*To a fresh tank, add 1 bottle of Type A starter per rack of developer.

Date 17 Dec. 1965

EXPOSURE

Sensitometer 1B
Filter Daylight
Exposure Time 1/25 second

Experimenter _____ Date _____ Witness _____ Date _____

Log $E_{11} = 1.30$

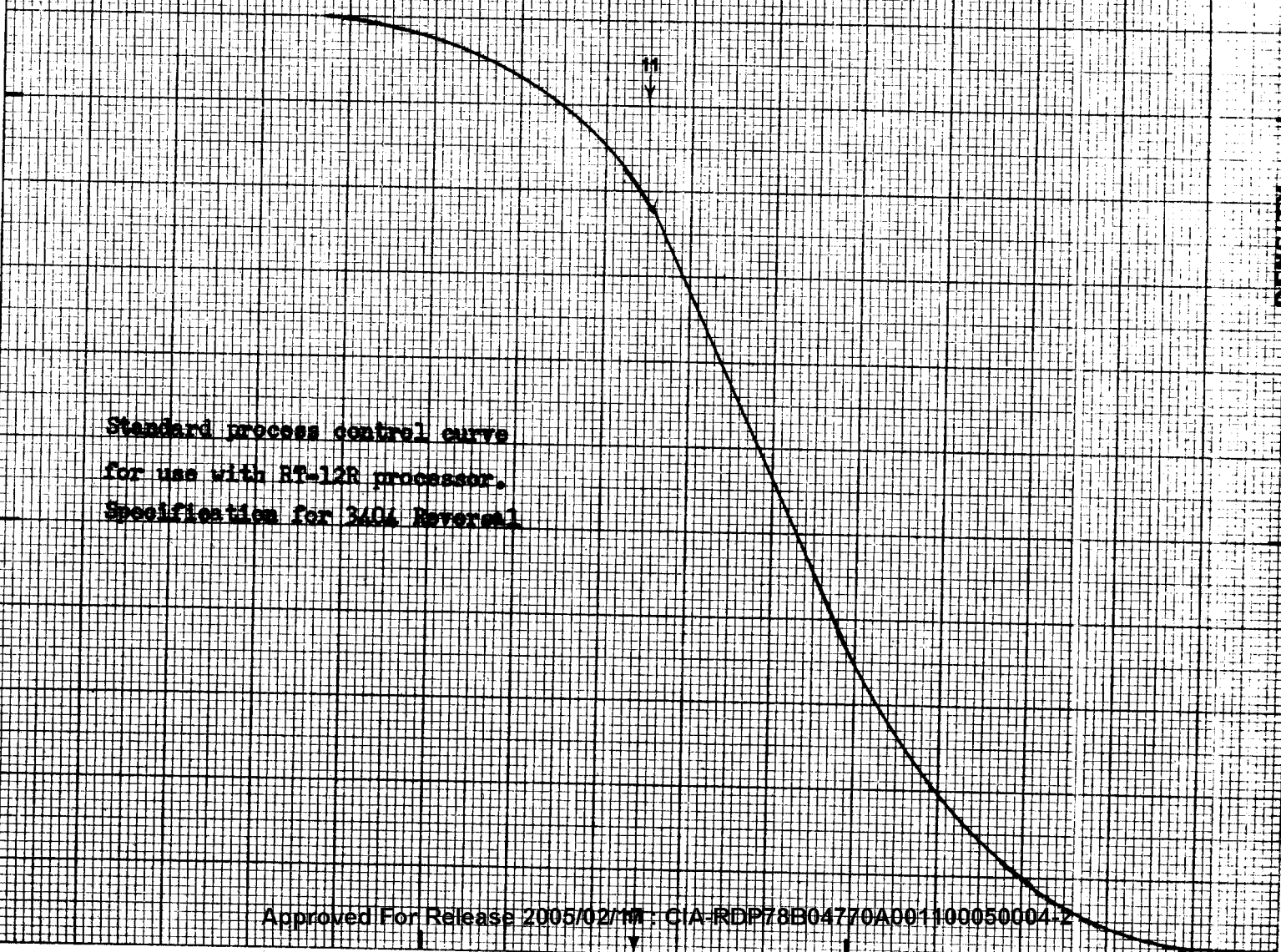
PROCESSING

Gamma 2.20
Fog .04

DENSITY

Standard process control curve
for use with RT-12R processor.
Specification for 3404 Reversal

LOG EXPOSURE



DATE 11-12-65

MACHINE RT-12R
PRODUCT Original Negative
EMULSION TYPE 3404
SIZE Up to 9.5 inches
PROCESS EMULSION UP TO

MACHINE SPEED DIAL SETTING	5
FILM STRIP SPEED	51' / m
SECONDS PER RACK	52"
THREAD-UP	Full
Intermediate Process Level	

Intermediate Process Level

[illegible]

COMMENTS:

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To a fresh tank of developer, add 1 bottle of Type A starter solution per rack.

1. Adjust speed dial to zero ft/min before shutting off machine.
2. Heater selector set at 5.
Blower selector set at 3.

Date 17 Dec. 1965

EXPOSURE

Sensitometer 1B
Filter Daylight
Exposure Time 1/25 second

Log E₁₁ = 1.30

Experimenter _____ Date _____ Witness _____ Date _____

PROCESSING

Gamma .6 G/Speed
1.86 1.49 Fog .20

DENSITY

Standard process control curve
for use with E7-12R processor.
Specification for 3404 Negative

LOG EXPOSURE

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DATE 11-12-65

PROCESSING SPECIFICATION NO. _____

Reversal Process

MACHINE RT-12R
PRODUCT Original Negative
EMULSION TYPE 3401
SIZE Up to 9.5 inches
PROCESS EMULSION UP ☒ DOWN ☐

MACHINE SPEED DIAL SETTING 9
FILM STRIP SPEED 9"/m
SECONDS PER RACK 28
THREAD-UP Full

PROCESSING STAGE	CHEMICAL		(mls/min)	(°F)	TIME	NO. R.	PUMP PRESSURE	NOZZLE TYPE	TYPE	AGITATION	
	TANK	RPL.	RPL. RATE	TEMP.						GAS	PRES.
1st Developer	14DN20G*	14DN20G	250 (70mm) 500 (9½")	72±.5	1'51"	4			Roller Action		
Rinse	H ₂ O	H ₂ O	100%	72±2	28"	1			Roller Action		
Bleach	R-9S	R-9-RS	400 (70mm) 1000 (9½")	72±2	28"	1			Roller Action		
Clearing Bath	CB-2	CB-2	500	72±2	28"	1			Roller Action		
Rinse	H ₂ O	H ₂ O	2 gal.	72±2	28"	1			Cascading		
2nd Developer	D-95	D-95R	500	72±1	56"	2			Roller Action		
Rinse	H ₂ O	H ₂ O	2 gal.	72±2	28"	1			Cascading		
Fix	Type A	Type A	500	72±2	28"	1			Roller Action		
Wash	H ₂ O	H ₂ O	2 gal.	72±2	1'24"	3			Cascading		
Dryer				130±5							

DAMPER SETTINGS:
INTAKE _____

VARIAC SETTINGS
LOCATION OR NO. OF WGTs. _____

COMMENTS:

EXHAUST _____

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* To a fresh tank, add
1 bottle of Type A starter per rack of developer

1. Re-exposure amperage set at 5.24.
2. Powerset set at 70.
3. Heater selector set at 5.

EXPOSURE

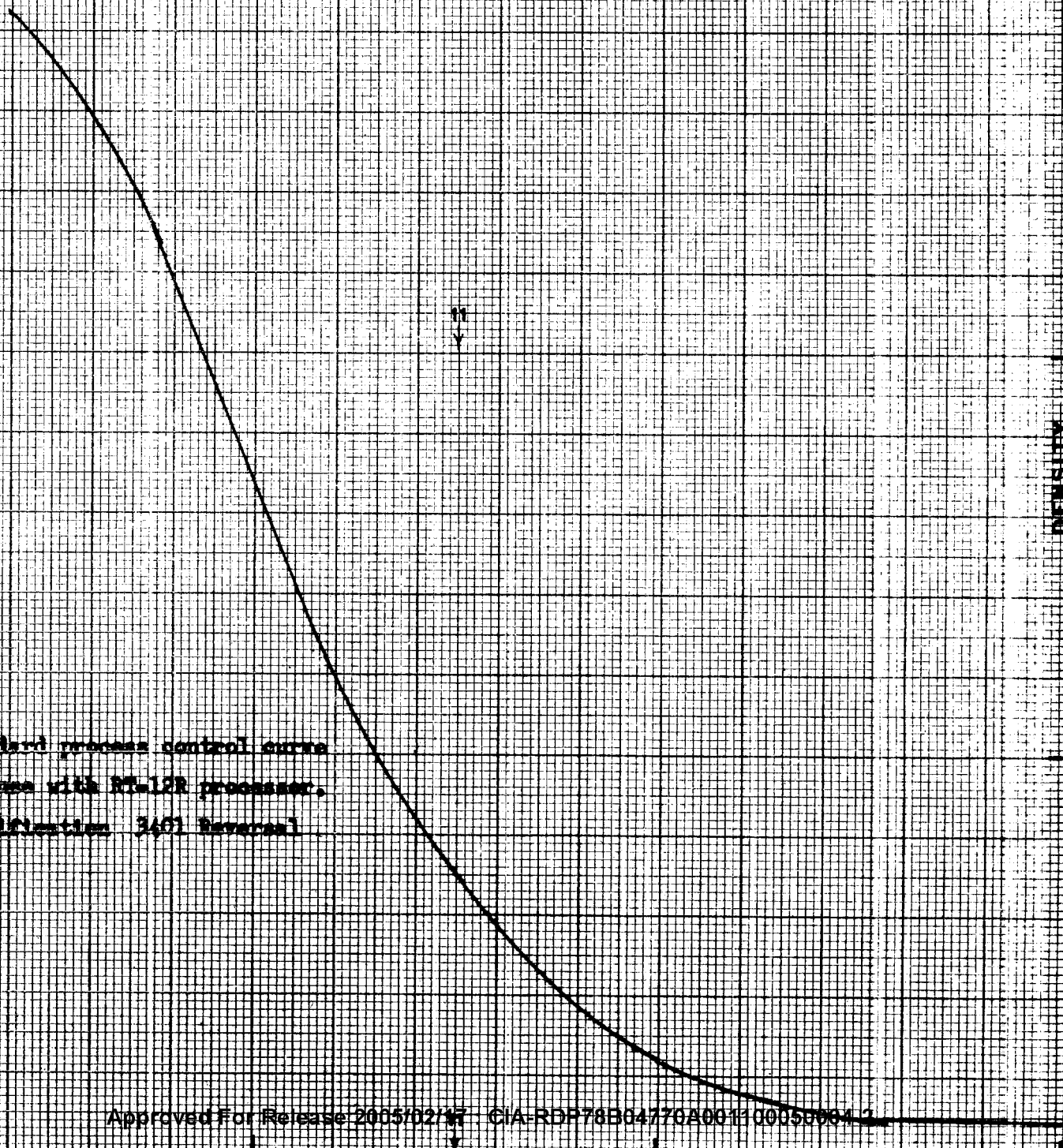
Sensitometer 1B
 Filter Daylight
 Exposure Time 1/100 second

Log E₁₁ = 2.70

Experimenter	Date	Witness	Date

PROCESSING

Gamma	Fog
2.52	.10



Standard process control curve
 for use with RT-12R processor.
 Specification 3401 Reversal

Date 17 Dec. 1965

EXPOSURE		Experimenter	Date	Witness	Date
Sensitometer	1B				
Filter	Daylight				
Exposure Time	1/100 second				

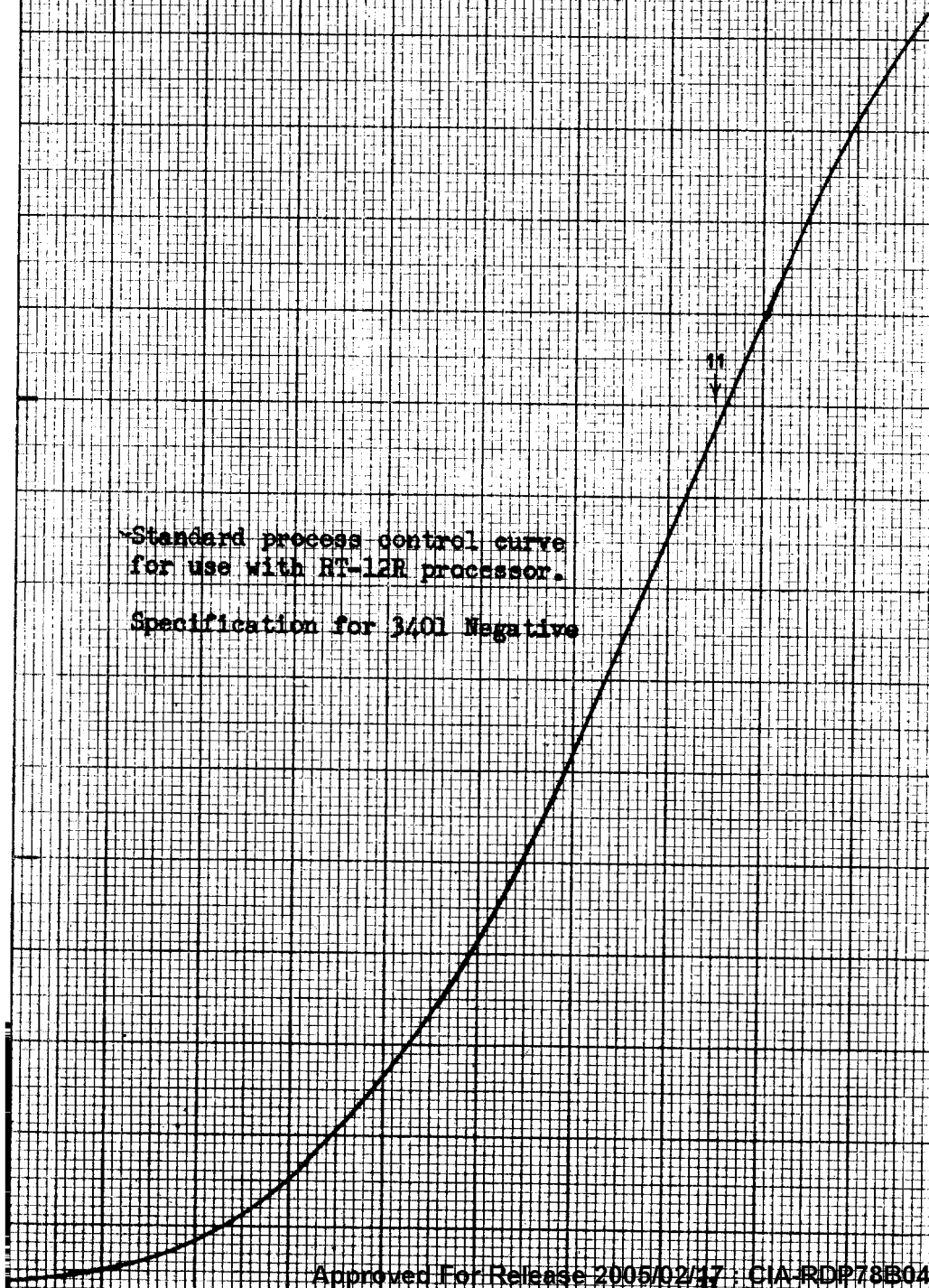
$$\log R_{11} = 2.70$$

PROCESSING

Gamma	1/6 G/Speed	Fog
2.37	2.04	.09

Standard process control curve
for use with RT-12R processor.

Specification for 3401 Negative



Emulsion 8430

Date 17 Dec. 1965

EXPOSURE		Experimenter	Date	Witness	Date
Sensitometer	1B				
Filter	3000° K				
Exposure Time	1 second				
		Log E ₁₁ = 1.38			

PROCESSING

Gamma	.6 Density Speed	Fog
1.72	1.25	.04

Standard process control curve
for use with RT-12R processor.
Specification for 8430 Negative

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DENSITY

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PROCESSING SPECIFICATION NO. _____

DATE 11-12-65

Reversal Process

MACHINE RT-12R
PRODUCT Dupe Pos & Neg
EMULSION TYPE 8430
SIZE Up to 9.5 inches
PROCESS EMULSION UP ☒ DOWN ☐

MACHINE SPEED DIAL SETTING 12
FILM STRIP SPEED 12'/m
SECONDS PER RACK 21
THREAD-UP Full

PROCESSING STAGE	CHEMICAL TANK	RPL.	(mls/min) RPL. RATE	(°F) TEMP.	TIME	NO. R.	PUMP PRESSURE	NOZZLE TYPE	TYPE	AGITATION GAS	PRES.
1st Developer	14DN20G*	14DN20G	250 (70mm) 500 (9½")	75±.5	1'24"	4		Roller Action			
Rinse	H ₂ O	H ₂ O	100%	75±2	21"	1		Roller Action			
Bleach	R-9S	R-9S	400 (70mm) 1000 (9½")	75±2	21"	1		Roller Action			
Clearing Bath	CB-2	CB-2	500	75±2	21"	1		Roller Action			
Rinse	H ₂ O	H ₂ O	2 gal.	75±2	21"	1		Cascading			
2nd Developer	D-95	D-95R	500	75±1	42"	2		Roller Action			
Rinse	H ₂ O	H ₂ O	2 gal.	75±2	21"	1		Cascading			
Fix	Type A	Type A	500	75±2	21"	1		Roller Action			
Wash	H ₂ O	H ₂ O	2 gal.	75±2	1'03"	3		Cascading			
Dry				125±5							

DAMPER SETTINGS:
INTAKE _____

EXHAUST _____

VARIAC SETTINGS
LOCATION OR NO. OF WGTs. _____

COMMENTS:

1. Re-exposure amperage set at 5.25.
2. Powerstat set at 70.
3. Heater selector set at 5.
4. Blower selector set at 3.

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* To a fresh tank, add 1 bottle of Type A starter per rack of developer.

Date 17 Dec. 1965

EXPOSURE	Experimenter	Date	Witness	Date
Sensitometer 1B				
Filter 3000° K				
Exposure Time 1 second				

Log E_{11} = 1.38

PROCESSING

Gamma

1.90

Fog

.18

m
y

Standard process control curve
for use with RT-12R processor.
Specification for B430 Reversal

DENSITY

PROCESS SPECIFICATION No. _____ DATE 10-11-65

MACHINE RT-24
 PRODUCT Paper
 KIND ~~EMULSION TYPE~~ Kodabromide F-2
 SIZE 24-inch
 PROC. EMUL. UP ☐ DOWN ☒

MACHINE SPEED DIAL SETTING 5.5 ft./min.
 FILM STRIP SPEED 5.5 ft./min.
 SECONDS PER RACK 45
 THREAD UP Full

PROCESSING STAGE	CHEMICAL		REFL RATE (PER MIN)	TEMP °F	(Min.) TIME	NO. R	AGITATION	COMMENTS
	TANK	REPL						
Developer	Dektol 1:2	Dektol 1:2	100	68	1 1/2	2	Recirculation and Roller Action	1. Replenisher rates are tentative:
Fixer #1	Versamat Type A	Versamat Type A	150	68	1 1/2	2	"	extensive runs could indicate minor
Fixer #2	F-5	F-5	75	68	3/4	1	"	changes.
Wash	H ₂ O		3 1/2 gal	68	5 1/4	7	Roller Action	2. Three ratosights are provided; setting is 3 1/2 gals./min. for each.
Dryer				* 120	3	4		3. Air sensor pressure setting is 1 3/4 psi; main air line setting 20 psi.

~~DAMPER SETTINGS:~~

~~INTAKE~~ * Blower selector set at 2
 Heater selector set at 2

EXHAUST _____

Emulsion

Kodabromide F
Approved For Release 2005/02/17 : CIA-RDP78B04770A001100050004-2

EXPOSURE

Sensitometer 1B
Filter 3000°K
Exposure Time 1/2 sec. Log $E_{11} = 1.08$

PROCESSING

Gamma

1.70

Process Control Curve for
use with RT-24 Processor
Specification for
Kodabromide F-2 Paper

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↓

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Approved For Release 2005/02/17 : CIA-RDP78B04770A001100050004-2

LOG EXPOSURE

DENSITY

DATE 10-11-65

PROCESS SPECIFICATION No. _____

MACHINE RT-24
 PRODUCT Paper
 KIND ~~EMULSION~~ Resisto Rapid
 SIZE 24-Inch
 PROC. EMUL. UP ☒ DOWN ☐

MACHINE SPEED DIAL SETTING 8.5 ft./min.
 FILM STRIP SPEED 8.5 ft./min.
 SECONDS PER RACK 30
 THREAD UP Full

PROCESSING STAGE	CHEMICAL		REPL RATE (PER MIN)	TEMP °F	(Min.) TIME	NO. R	AGITATION	COMMENTS
	TANK	REPL						
Developer	Dektol 1:2	Dektol 1:2	200	68	1	2	Recirculation and Roller Action	1. Replenisher rates are tentative;
Fixer #1	Versamat Type A	Versamat Type A	300	68	1	2	"	extensive runs could indicate minor
Fixer #2	F-5	F-5	150	68	1/2	1	"	changes.
Wash	H ₂ O			68	3 1/2	7	Roller Action	2. Three ratosights are provided; setting is 3 1/2 gal./min. for each.
								3. Air sensor pressure set at 1 3/4
Dryer				* 120	2 1/4	4		psi; main air pressure set at 20

~~EXPOSED SETTINGS~~

~~EXPOSED~~ * Blower selector set at 2
 Heater selector set at 2

~~EXPOSED~~

Dry to Dry 8 1/4 Min.

Emulsion

Resisto Rapid N

Approved For Release 2005/02/17 : CIA-RDP78B04770A001100050004-2

EXPOSURE

Sensitometer

1B

Filter

3000°K

Log E_{11} = 1.08

Exposure Time

1/2 sec.

PROCESSING

Gamma

1.32

11
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Process Control Curve for use
with RT-24 Processor Specification
for Resisto Rapid N-2 Paper

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LOG EXPOSURE

DENSITY

997234

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DATE 10-11-65

PROCESS SPECIFICATION No. _____

MACHINE RT-24
 PRODUCT Paper
 KIND ~~XXXXXXXXXX~~ Resisto Rapid
 SIZE 24-Inch
 PROC. EMUL. UP ☒ DOWN ☐

MACHINE SPEED DIAL SETTING 8.5 ft./min.
 FILM STRIP SPEED 8.5 ft./min.
 SECONDS PER RACK 30
 THREAD UP Full

PROCESSING STAGE	CHEMICAL		REPL RATE (PER MIN)	TEMP °F	(Min.) TIME	NO. R	AGITATION	COMMENTS
	TANK	REPL						
Developer	Dektol 1:2	Dektol 1:2	200	68	1	2	Recirculation and Roller Action	1. Replenisher rates are tentative;
Fixer #1	Versamat Type A	Versamat Type A	300	68	1	2	"	extensive runs could indicate minor
Fixer #2	F-5	F-5	150	68	1/2	1	"	changes.
Wash	H ₂ O			68	3 1/2	7	Roller Action	2. Three ratosights are provided; setting is 3 1/2 gal./min. for each.
Dryer				* 120	2 1/4	4		3. Air sensor pressure set at 1 3/4 psi; main air pressure set at 20 psi.

~~XXXXXXXXXX~~

~~XXXXXX~~ * Blower selector set at 2
 Heater selector set at 2

~~XXXXXXXXXX~~

Dry to Dry 8 1/4 Min.

Approved For Release 2005/02/17 : CIA-RDP78B04770A001100050004-2

DATE 10-11-65

PROCESS SPECIFICATION No. _____

MACHINE RT-24
 PRODUCT Paper
 KIND ~~MMISIX~~ Kodabromide F-2
 SIZE 24-Inch
 PROC. EMUL. UP ☐ DOWN ☒

MACHINE SPEED DIAL SETTING 5.5 ft./min.
 FILM STRIP SPEED 5.5 ft./min.
 SECONDS PER RACK 45
 THREAD UP Full

PROCESSING STAGE	CHEMICAL		REPL RATE (PER MIN)	TEMP °F	(Min.) TIME	NO. R	AGITATION	COMMENTS
	TANK	REPL						
Developer	Dektol 1:2	Dektol 1:2	100	68	1 1/2	2	Recirculation and Roller Action	1. Replenisher rates are tentative;
Fixer #1	Versamat Type A	Versamat Type A	150	68	1 1/2	2	"	extensive runs could indicate minor
Fixer #2	F-5	F-5	75	68	3/4	1	"	changes.
Wash	H ₂ O		3 1/2 gal ²	68	5 1/4	7	Roller Action	2. Three ratios are provided; setting is 3 1/2 gals./min. for each.
Dryer				* 120	3	4		3. Air sensor pressure setting is 1 3/4 psi; main air line setting is 20 psi.

~~DAMPENING~~

~~INTAKE~~ * Blower selector set at 2
 Heater selector set at 2

EXHAUST _____

Dry to Dry 12 Min.

25X1

14 JAN

would like to

MEET WITH :

25X1

REGARDING RT-24 24" Roller TRANS.
PAPER PROCESSOR.

SUGGEST MON. AFT. 1330 (17 JAN)

Bayd.

25X1

met with

Result - (1) Investigate solution to Pin holes

(2) Investigate single tab

25X1

(3) [] is to operate machine on
interim basis with double tab to
determine if this is a real problem.